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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/577,734	05/23/2000	Kouji Takagi	13624	3883

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[REDACTED] EXAMINER

DUONG, THOI V

[REDACTED] ART UNIT [REDACTED] PAPER NUMBER

2871

DATE MAILED: 01/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/577,734	TAKAGI, KOUJI
	Examiner Thoi V Duong	Art Unit 2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) Responsive to communication(s) filed on 02 December 2002.

2a) This action is FINAL.      2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

4) Claim(s) 2-7 and 9-13 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 2-7 and 9-13 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 23 April 2002 is/are: a) accepted or b) objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some \* c) None of:

1. Certified copies of the priority documents have been received.

2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.

3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) Notice of References Cited (PTO-892)      4) Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)      5) Notice of Informal Patent Application (PTO-152)

3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.5 & 14.      6) Other: \_\_\_\_\_.

## DETAILED ACTION

1. This office action is in response to the Amendment, Paper No. 13, filed December 02, 2002.

Accordingly, claims 2, 4, 5 and 9 were amended, claim 1 was cancelled without prejudice, and claims 8 and 14 were previously cancelled without prejudice. Currently, claims 2-7 and 9-13 are pending in this application.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 2-7 and 9-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishikawa (JP 05-232509) in view of Taniguchi et al. (USPN 6,334,689 B1).

As shown in Figs. 2 and 3, Nishikawa discloses a liquid crystal display (LCD) device having a liquid crystal display panel, said liquid crystal display panel comprising: a plurality of pixels, ... which are disposed in a matrix having rows and columns and each of which has at least a thin film transistor (TFT) 1 and a pixel electrode 20, each said pixel having an opening defining an aperture ratio;

a plurality of gate signal lines GL2, GL3, ... which extend from a gate signal input portion disposed along a side of said liquid crystal display panel and each of which is coupled with said TFT's in a row of said matrix; and

auxiliary capacitor portions CSCA, CSCB, CSCC each additionally coupled with a pixel electrode of one of said pixel, the width of said gate signal line becomes narrower and thereby capacitance of said auxiliary capacitor portions becomes smaller as the distance from said gate signal input portion becomes larger (see Abstract),

wherein an area of an aperture portion of said pixel becomes larger as the distance from said gate signal input portion becomes larger due to smaller auxiliary capacitor portions. Accordingly, it is obvious that the aperture ratio increases as the capacitance of said auxiliary capacitor portions becomes smaller.

Nishikawa also discloses that a capacitance of auxiliary capacitor portions is determined by an area of an opposing portion between a pixel electrode of a pixel and a gate signal line coupled with an adjacent pixel via an interlayer insulating film 14 and a oxide film 28 between said pixel electrode and said gate signal line (see Specification, paragraph 13 through paragraph 18).

Nishikawa discloses a LCD device that is basically the same as that recited in claims 2-7 and 9-13 except that for a backlight portion. As shown in Figs. 2 and 3 Prior Art, Taniguchi discloses a backlight portion employed in a conventional liquid crystal display device used in lap-top type or notebook type personal computers. The backlight portion comprises one elongated light source 1 and a light guide plate 2 which is provided with an optical scattering layer 3 from which light is scattered. A reflection sheet 4 that causes the light to reflect and a diffusion sheet 5 that passes and illuminates the whole surface with a uniform brightness are provided underneath side of the light guide and over the surface of the light guide respectively. As to the optical

scattering layer 3, which is shown more detail in Fig. 3, it consists of a plurality of ink dots 8, formed of optical scattering materials, arranged on the surface of light guide 2 (col. 1, lines 64-67). As the distance increase from the light source 1, the optical intensity from the light source 1 is reduced. Therefore, as the distance increases from the light source 1, as shown in Fig. 3, the area of the ink dots 8 is increases (col. 2 lines 1-4). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the LCD's device of Nishikawa as taught by Taniguchi by employing a backlight portion for illuminating said liquid crystal display panel from the backside thereof so that luminance of backlight by said backlight portion becomes lower as the distance from said gate signal input portion becomes larger so as to obtain a high image luminance and a high image display quality.

### ***Conclusion***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thoi V. Duong whose telephone number is (703) 308-3171. The examiner can normally be reached on Monday-Friday from 8:00 am to 4:30 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim, can be reached at (703) 305-3492.

Thoi Duong  
01/18/2003

  
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